

Thinking Schools, Thinking Classrooms

Article By **John McKellar**, first published in *HeadTeacher Update*, February 2008

Things change only slowly in education and some say that things don't actually change, they just get re-discovered and re-named. There may be some truth in that, for the process of change in education is complex and requires the sympathetic coming together of some key components, such as: commonly accepted beliefs in what constitutes worthwhile teaching and learning, political and social support, models of effective practice, and opportunities for teachers and pupils to do and learn. It may be safe to say that these components have succeeded to rendezvous – albeit via a variety of routes – to enable schools and classrooms to identify themselves as “thinking schools” or “thinking classrooms”.

The idea of describing schools and classrooms as places where thinking is actively encouraged might seem to many as fundamental to their purpose - an activity that ought to be taken for granted; and yet there is a real sense that something different is happening now in our schools with respect to how they promote thinking. In fact, what is happening isn't the result of some major new discovery about learning or teaching, but is the product of the merging together of many long – established processes in educational thinking and practice that are often defined under the Constructivist theory of learning.

Within this camp teachers recognise the work of Piaget who regarded thinking as an active process where learners developed their cognitive capacity through interacting with the world around them. Here too, the Russian psychologist, Vygotsky, would be acknowledged for it was he who emphasised the social dimension of learning and thinking and stressed the importance of social interactions developing language and subsequently developing thought and meanings. Learning by doing and learning through talk invites the learner to be an active participant in the learning process interacting with an enriched environment that we, their teachers, create for them to explore. The much-maligned concept of child-centred learning is given a new impetus within Constructivism. Now a learner engaged in a problem-solving activity or conducting an enquiry is challenged to self-manage, to employ and devise strategies to overcome obstacles, to



work collaboratively, to use initiative and make decisions. They construct their own meanings by asking and answering their own questions and are able to reflect positively on their successes or failures. These processes have merged to help define and illustrate what is meant by *Enquiry Learning, Thinking Skills, Problem-Solving, Creative Thinking* or *Critical Thinking*, all of which emphasise thinking as its central learning activity.

But why the move towards Constructivist activities to promote the thinking school and the thinking classroom and away from the more traditional “chalk & talk” teacher-led pedagogy? Within the bigger picture, schools have begun to re-examine their curricula in the light of recent developments in learning for the 21st century and this has been inspired by a range of issues, for example, in no particular order of importance:

- tomorrow's citizens and employees will be required to have flexible life skills that will enable them to solve problems in different contexts; to be able to work successfully with others as well as independently; to be able to evaluate and self-reflect in order to consider options and strategies when faced with obstacles
- the drive towards Personalising Learning especially at KS4 and beyond where students may follow a curriculum devised across a cluster of specialist colleges within a personalised timetable will require independent learning skills
- recent developments in brain functions and growth and how these relate to education have impacted considerably so that now we consider not only what our pupils learn, but

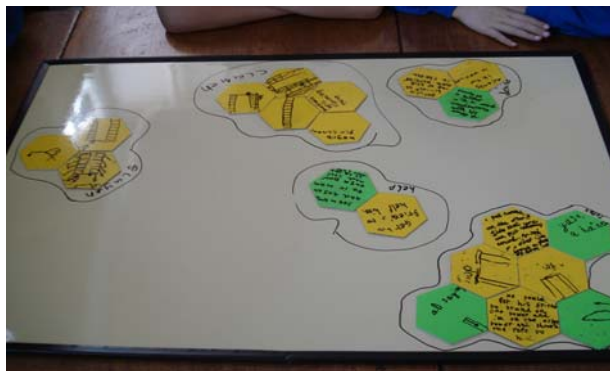
how they learn best and the latter stresses the need for problem-solving, inferring and synthesizing to enable neural connections to develop cognitive capabilities

- working collaboratively is promoted and valued not least because we now discuss its effectiveness in terms of emotional intelligence, inter and intra-personal intelligences, thinking through talk, using higher-order questioning for research and topic-based activities
- schools are no longer overwhelmed (in all senses) by the National Curriculum and National Strategies and are now stepping back to critically examine the nature and depth of the learning their pupils enjoy and are talking about the processes involved in learning such as meta-cognition, brain-friendly learning, active learning and learner-centred environments
- the rise in popularity of P4C and Communities of Enquiry across all key stages has released the pupil's voice (with echoes of Lawrence Stenhouse's 1970s Humanities Curriculum Project) and their analytical enquiries challenge both pupils and teachers to engage in thinking dialogues
- and finally, the welcomed event of DCSF publications such as Excellence & Enjoyment which stresses the importance of thinking skills, problem-solving and enquiry-based learning and which has encouraged schools to take control of teaching and learning once again after decades of centralised curricula that essentially de-skilled a generation of teachers

Clearly then, a Constructivist learning culture is beginning to emerge sanctioned by central Government and underpinned by educational thinking and research. Teachers have access to a large database of information about thinking skills, enquiry learning, problem solving and so forth on the Standards and Teachernet sites. For all intents and purposes we are primed for a thinking skills revolution in our schools and classrooms, but although the conditions may be in place and the desire to proceed may be evident there remains a lack of knowledge about what actually we ought to be doing to promote thinking and what tools we might use to ensure that we are promoting it effectively.

A useful starting point for teachers wishing to develop thinking skills in their schools and classrooms is to remember that they're not dealing with some "...mysterious entity existing somewhere in the mind ..." as expressed by Robert Fisher who goes on to remind us that we're dealing with the recognisable "...human capacity to think in conscious ways to achieve certain purposes." (1) I say "recognisable" because once we begin to unpick what is meant by thinking skills, the features that define the process become familiar consisting of the abilities to: remember, question, plan, reason, imagine, invent, hypothesise, predict, sequence, sort, compare, classify, synthesise and evaluate, amongst others (for a comprehensive discussion on what constitutes thinking skills refer to McGregor: Developing Thinking Developing Learning). (2) The important point is that teachers generally engage pupils with these and many other operations but perhaps without attaching the thinking skills label to them. The next important point to make is that such engagement has to be planned and seated within everyday classroom activities if pupils are to become skilled in thinking.

This was a key message I wanted to communicate to colleagues across the East Cleveland EAZ as I worked with primary pupils using the LogoVisual Thinking tools as a vehicle for engaging them in collaborative thinking. I wanted to demonstrate the ease by which pupils could be challenged to construct meanings through talk using their existing knowledge as well as interacting with new information; to show how the decisions that pupils subsequently made could be harnessed to drive their thinking forward to deeper exploration of the subject matter, often through drama. In effect, to position thinking within the core business of the classroom rather than having it consigned to PSHE as an enquiry event or as a programme regarded as additional to schools' normal



curriculum, which too often happens.

I wish to outline two examples of this work but firstly, a brief word about using the LogoVisual Thinking (LVT) tools a full description of which can be found on the website, <http://www.logovisual.com>. Essentially, the tools consist of A1 size double-sided lightweight magnetic boards and a number of 3-inch dry-wipe hexagonal shapes available in a range of colours. Pupils in a group write on the hexagons in response to a stimulus, initially setting their individual thoughts onto the board which they later, in collaboration with others, review and cluster into categories of statements, ideas, concepts, opinions or questions. The tools offer an easy and accessible way for making thinking visible enabling pupils to re-shape and re-construct their meanings by physically moving the hexagons around the board. The magnetic quality of the hexagons makes it easy to display group outcomes enabling pupils to refer to their work when they come to present it to others. The simplicity of LVT enables pupils to focus their thinking on the given subject, to attend to its issues immediately rather than spending valuable time learning how to use the tools.

I wish now to outline examples of work with primary pupils using the LogoVisual Thinking tools to illustrate their ease of application in facilitating collaborative thinking on themes from text.



The first example involved a class of Y3 pupils who were reading the text "The Man Who Walked Between the Towers" by Mordicai Gerstein. (3) The teacher had read through the text with her pupils to the point where Philippe Petit considers how to stretch his tight-rope between the two towers. It's a real problem for the hero in the story, and an equally real problem for pupils to think about. They discussed the problem in pairs, writing or sketching their ideas on the MagNotes which were later considered by the whole group.

Through group discussion the ideas were assembled into clusters and categorised under a label. Through this process pupils collated a range of solutions to the problem which they presented and explained to one another in a plenary.

Solutions were creative and highly plausible and children were able to argue their case with authority having had the benefit of prolonged discussion on the merits of each suggestion.

The teacher wanted now to challenge the pupils to think deeper about the issues involved in Philippe Petit's taking such a risk with his life in tight-rope walking between the Twin Towers. The children engaged with the question: "Was Philippe foolish to make such a dangerous walk?" Some general discussion highlighted the risks to himself and to others were he to fall, how his family would feel and if the risk was really worth taking. The class was informed that they would have the opportunity to meet with Philippe Petit and ask him questions. Using the LogoVisual tools, pupils formulated their own questions, then sorted them into clusters of a similar type and re-framed each question to encapsulate what the cluster, as a whole, was asking. In this way, each group developed several important questions that focused on the issues of risk, safety, responsibility and justification.

Of course the children needed adult help to achieve this, especially in evaluating clusters and agreeing what their composite questions should be. They nevertheless showed remarkable skill in analysing the situation, devising personal questions, evaluating and combining these to reach an agreed two or three pertinent points to put to the character. When the role-play eventually took place, Philippe Petit in the "hot-seat" had to grapple with some demanding issues that enabled him to challenge the children's thinking even further :

Q: Won't your family be frightened and worried if you do this?

A: Perhaps so, but don't you think they will be proud of me too?

Q: Aren't you frightened that you'll fall?

A: No. I have no fear of falling because I am confident in my abilities. When you know what you can do, why should you fear doing it?

The success or otherwise of hot-seating often depends on the quality of questions put to the character and too often children ask questions without adequate thinking time to allow them to formulate probing rather than superficial questions. In this scenario, through the LogoVisual tools, the children maintained a clear focus on what was relevant and were able – having given considerable thought already to the issues – to respond to the responsive questions Philippe Petit put to them and so additional queries were formulated as part of the thinking process. The children later consolidated their thinking by penning a letter to Philippe Petit giving their personal views about his stunt.

My second example is with a Y6 class who had been reading the novel *Wolf Brother* by Michelle Paver. (4) The

children were keen to explore the concept of Clans which features significantly in the story and to do so through a drama. Some initial research into clans and clanship was called for so that the drama could be

about clans, to sort their knowledge into clusters and to title the clusters with a statement that presented their findings.

Active cross referencing ensued where pupils checked their statements against their source material, scanned texts for further information, selected, rejected, re-stated information and eventually agreed on a set of findings clustered and titled ready for display and explanation to the whole group. The results reflected a thoughtful interaction with the texts as well as evidence that pupils included prior knowledge about clans.

Following the plenary where findings were presented, information was collated and summarised on the flip-chart. What had been learned about Clans

developed and this preparatory work was achieved by using the LogoVisual boards.

A resource bank of information about clans from various countries, cultures and historical contexts comprising factual texts, pictures, and passages from fiction was compiled which the pupils read and discussed in small groups. Using the LogoVisual tools, groups were then asked to note down everything they now knew

now enabled the drama to proceed since the class had a number of reference points from which to develop their ideas and their roles.

Listed below are some of the salient points the children made about clans. The information was essential to enable the group to develop their drama on the basis of factual knowledge and understanding of their subject.



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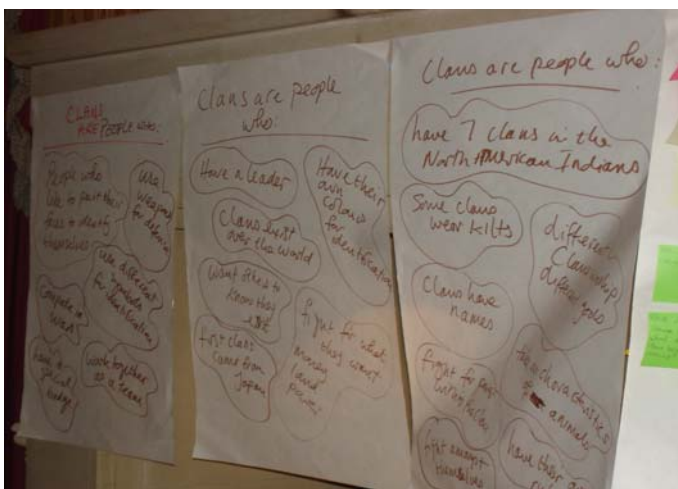
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CLANS: worship their own gods / compete against each other / are sometimes violent / protect their own people / guard their territory / act as a team / are identified by a name or symbol / some clans today are gangs / some are powerful / they have a leader / they fight amongst themselves / they have strict rules / they have tribal markings / they don't mix with other clans / they have a ceremony to enter the clan / they go through an ordeal to become a member / they carry weapons for clan wars.



This sample of what the children produced from their initial research and organisation of information provides a wealth of stimulus material upon which to develop a drama. In the event, the children focused on the idea of clans competing against each other and initiation ceremonies, and it was these two themes that developed into a drama based on ritual.

In these examples children made effective use of LogoVisual Thinking tools to solve problems, generate ideas and knowledge, raise questions and find answers. Their thinking was engaged, challenged and put to use in the everyday classroom environment, where, if we are to embrace the concept of the *thinking school* or the *thinking classroom* it truly belongs. Whatever tools and strategies teachers may use to engage children's thinking (and there are many from which to choose) their challenge is to ensure that it does not become an end in itself but is infused across the curriculum so that it defines the culture of the learning.

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